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Nokia 9110 Communicator The Remote Configuration Options

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1. ABOUT THIS DOCUMENT

The Nokia 9110 Communicator enables remote configuration. This means that sending special messages to the communicator, it is possible to configure various settings in the device. These messages can be sent by either using the GSM networks (GSM900, GSM1800, GSM1900) Short Message Service or by sending the message from a web server when the communicator is connected to the server.

This document contains instructions for configuring the communicator using these messages.

2. SENDING CONFIGURATIONS AND HOW THE USER SEES THEM

2.1 Using Short Message Service

Configuration SMSs must be sent from a device (a normal GSM phone using TAPI and GSM software, another Nokia communicator, etc.) which can send a short message to the GSM network in use by the communicator needing the settings.

NOTE: When sending the short message from one operator to another, SMS roaming between the operators must be supported.

2.2 Using the WWW Server

A script writing the configuration file is required in the server end. The file with the configuration information has to have ".ncm" ending and this ending must be configured with the following MIME type in the server:

application/vnd.nokia.configuration-message

When the file with correct information in it has been created the user can download it with the proper HTML pointed way. For example:

Download the configuration information using this link!.

Note! When downloading the information from the web server, the starting tag is not necessary. The message can start with the notify text.

2.3 When the Message Arrives

When a configuration message is received the communicator beeps and a notification note is displayed on the communicator screen. The figure 1 shows the e-mail configuration message notification note. The user can only select OK.

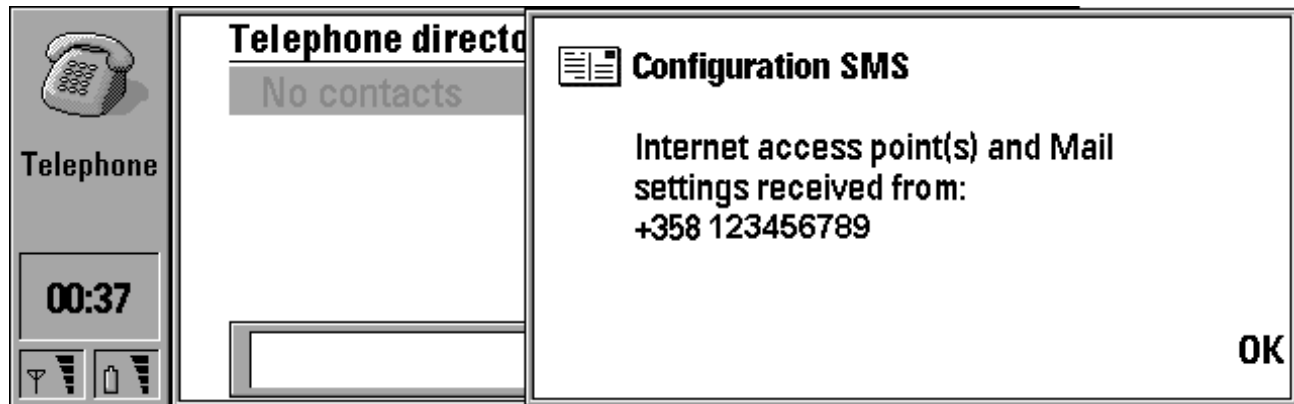


Figure 1. Configuration SMS notification note.

After the user has pressed OK (or hit Enter), the configuration message displays a window where the user can select, if to accept the configuration, cancel the configuration or view the details of the configuration. The selection window can be seen in Figure 2.

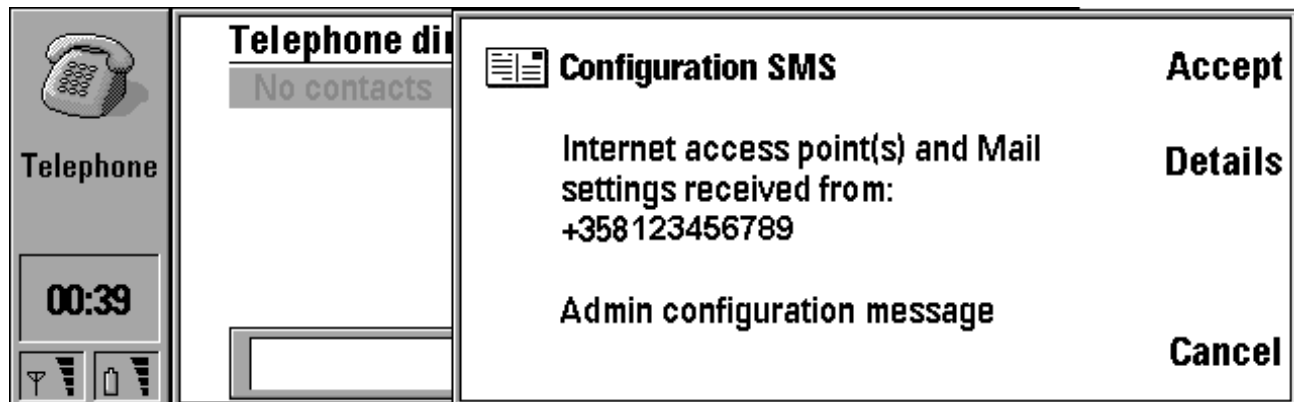


Figure 2. Configuration selection note.

Pressing accept will do the configurations immediately. If the user is not sure about the settings provided via the message, the user can select details to see what kind of configuration information is delivered. This will result a window seen in Figure 3. The example message has normal configuration information needed for e-mail configuration.

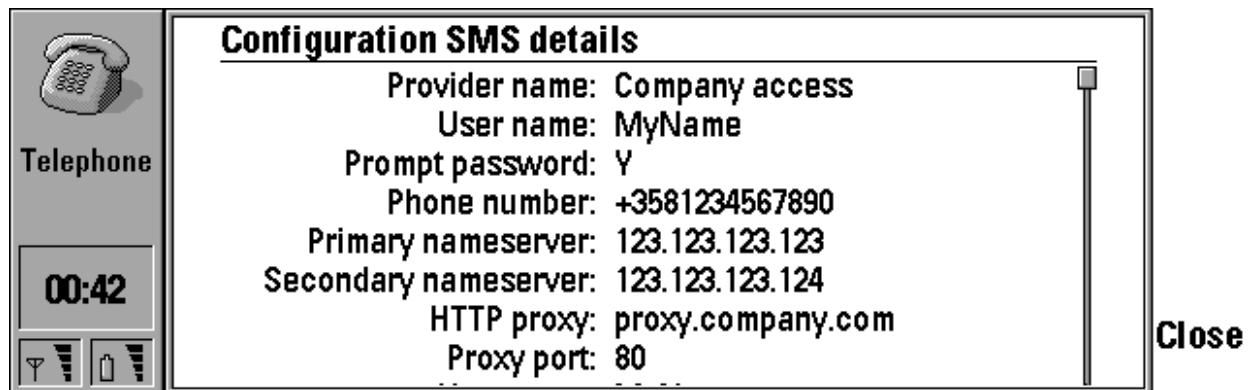


Figure 3. Configuration SMS details window.

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2.4 Making the Configurations

There are certain rules how the configuration messages can be used. The configuration message can only use an item which has been created with a configuration message. For example if the Internet Access Point has not been created using a configuration message, but it is used as an Internet Access Point when making e-mail configurations with a configuration message, the system will report problems in the message.

All the suggested settings has to be accepted by the user. If the configuration message creates an item which is the same name as previously manually created item an other item with the same name will be created. If the item has been previously created using a configuration message the configuration message sent with a same item name will update the information.

3. GENERAL FORMAT OF THE CONFIGURATION MESSAGES

IMPORTANT! The configuration message format should be followed precisely. Even minor deviations, such as an extra carriage return, can cause problems.

This section will describe the general format of configuration messages (**SMS_IAP_message**). All messages begin with a header followed by a carriage return. This header can be either a common communicator configuration header (**siap_header**) or a Narrow Band Socket (nbs) header (**siap_nbs_header**). The next line can contain a text string which will be displayed on the communicator screen to notify the user of the type of message received (**notify_text**). The last part of the message contains the configuration instructions (**infobody**).

```
<SMS_IAP_message> ::= {<siap_header>OR<siap_nbs_header>}
<notify_text> <infobody>
```

Configuration message can be used to configure 14 settings on the communicator. A single configuration message may configure only one of these except the combination of Internet access point and Mail settings. The format of the smart message is shown below.

```
<siap_header> ::= "//SIAP11" <LF> OR
<siap_nbs_header> ::= "//SCKL157F157F" <LF> AND
<notify_text> ::= <8bit_string> <LF> AND
<infobody> ::=
<Autofetch_item> OR
<WWWBookmark_item> OR
<IAP_settings> OR
<Mail_settings> OR
<SAP_settings> OR
<Script_settings> OR
<SMS_settings> OR
<Telnet_settings> OR
<Terminal_settings> OR
<WWW_settings> OR
<FTP_settings> OR
<Remotes_settings> OR
<Internet_settings> OR
<Telephone_settings>
```

The actual configuration sections contain "tags" which are used to define specific information in the message. A tag is followed by a colon, ":", followed by the value of the setting. For example, the tag for user name (luid) would be entered as:

```
luid:MyUserName<LF>
```

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3.1 IAP Settings

This section will describe the format of the Internet access point configuration messages.

```
<IAP_settings> ::=
<IAP_provider_name> <IAP_item>
```

```
<IAP_item> ::=
<IAP_default_gateway> OR
<IAP_compression> OR
<IAP_IP_address> OR
<IAP_login_customisation> OR
<IAP_modem_initialization> OR
<IAP_network_mask> OR
<IAP_no_proxy_for> OR
<IAP_password> OR
<IAP_phone_number> OR
<IAP_primary_nameserver> OR
<IAP_prompt_password> OR
<IAP_proxy> OR
<IAP_proxy_port> OR
<IAP_secondary_nameserver> OR
<IAP_secure_proxy> OR
<IAP_secure_proxy_port> OR
<IAP_user_name>
```

All the major settings which can be configured for the Internet access point can be defined in the message.

```
<IAP_default_gateway> ::= "ldgw:" <IP_string> <LF>
(TCP/IP default gateway address)
```

```
<IAP_compression> ::= "lcmp:" <flip_option> <LF>
<flip_option> ::= <On> ("any non-zero number") OR <Off> ("0")
(Is the compression on or off)
```

```
<IAP_IP_address> ::= "lip:" <IP_string> <LF>
(predefined TCP/IP address)
```

```
<IAP_login_customisation> ::= "llgn:" <login_type> <LF>
<login_type> ::= consists of 1-32 8bit characters; "1" for "Manual" OR "0" for "None" OR the name of
the script
(Special login sequence required, i.e. a script defined for this access)
```

```
<IAP_modem_initialisation> ::= "lini:" <8bit_string> <LF>
(the modem initialization string required for the access point)
```

```
<IAP_network_mask> ::= "lmsk:" <mask_string> <LF>
(TCP/IP network mask)
```

```
<IAP_no_proxy_for> ::= "lnop:" <8bit_string> <LF>
(defines which WWW pages should not be used with the proxy)
```

```
<IAP_password> ::= "lpwd:" <8bit_string> <LF>
(password for the Internet access point)
```

```
<IAP_phone_number> ::= "ITel:" <phone_number> <LF>
```

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<phone_number> ::= [+]<1 OR 2 OR 3 OR 4 OR 5 OR 6 OR 7 OR 8 OR 9 OR 0> OR <space (0x20)> OR <minus (0x2D)>
 (the telephone number for connection to the Internet access point)

<IAP_primary_nameserver> ::= "Idns1:" <IP_string> <LF>
 (the TCP/IP definition for name server IP-address)

<IAP_prompt_password> ::= "lpwp:" <flip_option> <LF>
<flip_option> ::= <Yes> ("Y" OR "Yes") OR <No> ("N" OR "No")
 (Should a password be prompted.)

<IAP_provider_name> ::= "Iname:" <8bit_string> <LF>
 (the name of the Internet access point)

<IAP_proxy> ::= "lprx:" <ip_string> <LF>
 (the proxy for WWW-access, can be an IP-address or a domain name)

<IAP_proxy_port> ::= "lppo:" <proxy_port> <LF>
<proxy_port> ::= Text string with only digits, max. 5 digits
 (the proxy port number)

<IAP_secondary_nameserver> ::= "Idns2:" <ip_string> <LF>
 (the TCP/IP definition for the name server IP-address)

<IAP_secure_proxy> ::= "lsrx:" <ip_string> <LF>
 (the proxy for WWW-access, can be an IP-address or a domain name)

<IAP_secure_proxy_port> ::= "lspo:" <proxy_port> <LF>
<proxy_port> ::= Text string with only digits, max. 5 digits
 (the proxy port number)

<IAP_user_name> ::= "luid:" <8bit_string> <LF>
 (the username for this access point, 0-50 characters)

An example message:

```
//SIAP11
Internet Access for the company
Iname:Company access
Itel:+123456789
luid:Measauser
lpwp:N
lpwd:2secret4u
Idns1:123.123.123.123
```

This message defines an Internet access point named Company access and adds it to the Internet access point list. The username for this new access point is "Measauser", the password is "2secret4u", the phone number to call is "+123456789", and the Primary Nameserver will be set as: 123.123.123.123.

```
//SCKL157F157F
The old Internet Access for the company
Iname: Old Access
Itel:+1234567890
luid:MeAsUser
lpwp:N
```

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```

lpwd:2Secret4U
lini:ats35=6
lip:123.123.123.1
ldgw:123.123.123.2
lmsk:255.255.255.0
ldns1:123.123.123.3
ldns2:123.123.123.4
lprx:www.cache.company.com
lppo:80
lnop:www.intranet.company.com

```

This long message uses the Narrow Band Socket header, which allows the configuration message to exceed 160 characters. The configuration above will be sent in three messages and will configure an Internet access point named Old Access, with information defined in the message.

3.2 Script Settings

Configuration messages can also be used to configure script information.

```

<Script_item>
<Script_name> AND
[
<Script_type>
]
{<Script_data> OR <Script_addition>}
{<8bit_string><LF>}

```

The script type is optional.

<Script_name> ::= "Pname:" <8bit_string> <LF>

(this defines the name for the script in the communicator Internet settings, maximum of 32 characters)

<Script_addition> ::= "Padd:" <Script_length> <LF>

<Script_length> ::= length of script data following the <LF> with ":"
(use this tag when the sent script is an addition to an existing script)

<Script_data> ::= "Pdata:" <Script_length> <LF>

<Script_length> ::= length of script data following the <LF> with ":"
(this tag will be used as the starting point of the script)

<Script_type> ::= "Ptype:" <8bit_string> <LF>

(this tag can be used to give more information to the user about the sent script; the currently known script type is: "PPP"; after the type there can be a space and version number for the script)

Description:

One smart message can contain several scripts. One script group must begin with a "Pname" field followed by either "Pdata" or "Padd", but not both. "Pname" defines the name of the script file. "Pdata" is followed by new script data. "Padd" is followed by additional data for an old script. If old script is not found, a new one will be created. Any white-space characters following field titles are removed and are not part of the script data. A line break is added before appending new data into an old script file.

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“Ptype” is optional and can be placed anywhere. It will define the script type identified in the preceding “Pname” field. In the Nokia 9110 Communicator, a missing “Ptype” field defaults to “PPP” (with capital letters, no spaces at the end).

“Pdata” and “Padd” may be followed by a number defining the length of the script data. The script data starts after the following <LF> character. Script length information is not required, but the <LF> is. If length is not specified, the script data continues until the end of the message or a new field is found. In the latter case the <LF> preceding the new field is not part of the script data. If length is specified, the script data contains <script_length> characters. If the end of the message is met before <script_length> characters are read, the script is corrupt and should be discarded. If the end of the message was not reached, the message is read until the next field is identified and script message parsing continues from there.

Sample Script Message 1:

```
//SIAP11
Script message
Pname:The_script
Pdata:
"/r
```

This message installs a script to the communicator Internet settings. The script will be named: The_script.

Sample Script Message 2:

```
//SIAP11
Pname:The_script1
Ptype:PPP
Pdata:
"/r
Pname: The_script2
Pdata: 14:""/r
:" "ppp"
```

This message will send two scripts to the communicator: The_script1 and The_script2. The_script2 length is defined as 15 characters. The scripts are also defined as PPP scripts.

3.3 Internet Settings

```
<Internet_settings> ::=
<Internet_compression> OR
<Internet_modem_initialization>
```

```
<Internet_compression> ::= "lv42:" <flip_option> <LF>
<flip_option> ::= <On> ("any non-zero number") OR <Off> ("0")
(selects if the V.42bis compression is on or off)
```

```
<Internet_modem_initialization> ::= "lmdm:" <internet_modem> <LF>
<internet_modem> ::= <"0"> for "Autobauding" OR <"2"> for "Fixed 9600 b/s" OR <"4"> for
"Fixed 14400 b/s" OR <8bit_string> for "Custom"
(set's the modem initialisation string, if left empty then none is set)
```

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3.4 Mail Settings

<Mail_item> ::=
<Mail_copy_to_own_email_address> OR
<Mail_define_remote_mailbox> OR
<Mail_delete_fetched> OR
<Mail_fetch_attachments> OR
<Mail_fetch_headers> OR
<Mail_internet_access> OR
<Mail_MIME_encoding> OR
<Mail_own_email_address> OR
<Mail_receiving_host> OR
<Mail_remote_mailbox_folder> OR
<Mail_remote_mailbox_password> OR
<Mail_remote_mailbox_protocol> OR
<Mail_remote_mailbox_username> OR
<Mail_send_mail> OR
<Mail_selected_font> OR
<Mail_sending_host> OR
<Mail_show_header_fields> OR
<Mail_use_remote_mailbox>

<Mail_copy_to_own_email_address> ::= "Mcpy:" <flip_option> <LF>
<flip_option> ::= <Yes> ("Y" OR "Yes") OR <No> ("N" OR "No")
 (this option is to determine if a copy of the mail will be sent back to the sending address)

<Mail_define_remote_mailbox> ::= "Mid:" <8 bit string> <LF>
 (The name of the new remote mailbox.)

<Mail_delete_fetched> ::= "Mdel:" <flip_option> <LF>
<flip_option> ::= <Yes> ("Y" OR "Yes") OR <No> ("N" OR "No")
 (option for deleting fetched mail from the remote mailbox)

<Mail_fetch_attachments> ::= "Matt:" <flip_option> <LF>
<flip_option> ::= <Yes> ("Y" OR "Yes") OR <No> ("N" OR "No")
 (option for fetching attachments with the communicator)

<Mail_fetch_headers> ::= "Mhdr:" <Mail_fetch_headers> <LF>
<Mail_fetch_headers> ::= <Mail_all> ("a" OR "A") OR <Mail_recent> ("r" OR "R")
 (option for displaying all of the mail headers or just those for mail which has arrived since the last login to the mail server)

<Mail_internet_access> ::= "Mname:" <access_point> <LF>
 (the name of the access point used, if this is not defined, the default access point will be used
 NOTE! the used access point has to be created with a configuration message)

<Mail_MIME_encoding> ::= "Mime:" <flip_option> <LF>
<flip_option> ::= <On> ("any non-zero number") OR <Off> ("0")
 (Is MIME encoding on or off?)

<Mail_own_email_address> ::= "Madr:" <7bit_string> <LF>
 (the email address where the mail has been sent, also shown as a reply path, 0-50 characters)

<Mail_receiving_host> ::= "Mrcv:" <ip_string> OR <hostname> <LF>
 (this option defines the remote mailbox host address - either an IP-address or a host name (a computer with POP3 or IMAP4 support to mailboxes))

<Mail_remote_mailbox_folder> ::= "Mbox:" <8bit_string> <LF>

(this option can be used with IMAP4 protocol, with IMAP4 it is possible to define a connection to a mail folder other than INBOX, 0-50 8bit characters)

<Mail_remote_mailbox_password> ::= "Mpwd:" <7bit_string> <LF>

(the password string for the defined mail access)

<Mail_remote_mailbox_protocol> ::= "Mpro:" <Mail_protocol> <LF>

<Mail_protocol> ::= ("i" OR "I") for IMAP4 OR ("p" OR "P") for POP3

(defines the protocol being used to fetch the mail)

<Mail_remote_mailbox_username> ::= "Muid:" <7bit_string> <LF>

(the username for the defined mail connection, 0-50 characters)

<Mail_selected_font> ::= "Mfnt:" <font_selection> <LF>

<font_selection> ::= any available font, in the basic communicator: "M" for URW Mono OR "R" for URW Roman OR "S" for URW Sans

(defines the font being used)

<Mail_send_mail> ::= "Msen:" <Mail_send> <LF>

<Mail_send> ::= ("u" OR "U") for "Upon request" OR ("d" OR "D") for "During next connection" OR ("i" OR "I") for "Immediately"

(send options for outgoing mail)

<Mail_sending_host> ::= "Msnd:" <ip_string> OR <hostname> <LF>

(defines the IP-address or host name of the computer being used to send e-mail (a computer with SMTP support))

<Mail_show_header_fields> ::= "Mshf:" <Mail_show_headers> <LF>

<Mail_show_headers> ::= ("a" OR "A") for "All" OR ("b" OR "B") for "Basic" OR ("n" OR "N") as in "None"

(defines how Internet mail headers are shown)

<Mail_use_remote_mailbox> ::= "Map:" <Mailbox_access_point> <LF>

(Previously defined access point to be used with this remotemailbox.)

An example of a Mail application configuration message:

```
//SIAP11
Mail configuration for you!
Mid:Company_mail
Mname:Company_access
Muid:MyUsername
Mpwd:2Secret4U
Mrcv:imap.company.com
Mpro:I
Madr:Me@company.com
Msnd:smtp.company.com
```

The message is 159 characters long and requires that the Internet Access Point: Company_access exists. This message will configure the communicator to use the IMAP4 protocol.

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3.5 SAP Settings

There are two ways to define the Text Web access point in the Nokia 9110 Communicator.

3.5.1 The Smart Messaging Way

Text Web service access point can be configured using this configuration message.

```
<SAP_settings> ::=
"Bsap:" <sap_name> <LF>
(max. 32 character text string, name for the Service Access Point)

<phone_number> "/" <phone_number> <LF>
```

Phone Numbers:

The first line should contain the TTML browser service access point name. The second row should contain two phone numbers separated by a "slash" character. There can be several access points in one message. (<phone_number> ::= [+]<1 OR 2 OR 3 OR 4 OR 5 OR 6 OR 7 OR 8 OR 9 OR 0> OR <space (0x20)> OR <minus (0x2D)>)

For example:

```
//SIAP11
Sap settings!
Bsap:My setting
123456789 / 0987654321
```

This message will create a new service access point for the Text Web application.

3.5.2 The Nokia 9110 Communicator Way

```
<SAP_Title > ::= "Gname:" <8 bit string>
(Text web service access point name) AND

<SAP_server_number> ::= "Gsrv:" <phonenumber>
(Text Web service access point number) AND
  <phone_number> ::= [+]<1 OR 2 OR 3 OR 4 OR 5 OR 6 OR 7 OR 8 OR 9 OR 0> OR <space
  (0x20)> OR <minus (0x2D)>

<SAP_service_number> ::= "Gtel:" <phonenumber>
(Text Web service access point server number)
  <phone_number> ::= [+]<1 OR 2 OR 3 OR 4 OR 5 OR 6 OR 7 OR 8 OR 9 OR 0> OR <space
  (0x20)> OR <minus (0x2D)>
```

For example:

```
//SIAP11
Sap settings!
Gname:My settings
Gsrv:123456789
Gtel:0987654321
```

3.6 SMS Settings

The Short Message Service Center number setting can be configured via SM.

```
<SMS_service_center_name> ::= "Sname:" <8 bit string>
(Short Message Service Centre name, max 29 characters) AND
```

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<SMS_service_center_number> ::= "Stel:" <phonenumber> <LF>
<phone_number> ::= [+]<1 OR 2 OR 3 OR 4 OR 5 OR 6 OR 7 OR 8 OR 9 OR 0> OR <space (0x20)> OR <minus (0x2D)>

Example message:

```
//SIAP11
Service center number!
Sname:Operator
Stel:+1234567890
```

This message will configure the SMSC number to be +1234567890. One can configure several message centres in the same message.

3.7 Telephone Settings

<Tele_settings> ::=
<Tele_voice_mailbox_number> ::= "Tbox:" <tele_number> <LF>
<tele_number> ::= Allowed characters are '+' (only as first character), '0' – '9', '', '#', '-', ' ', 'p', 'P', 'w' and 'W'. Maximum number of characters is 30.*
 (Set's the voice mailbox number.)

3.8 Telnet Settings

This section explains how to send Telnet application settings to the communicator.

<Telnet_settings> ::=
<Telnet_connection_name>
<Telnet_backspace_key> OR
<Telnet_destination_host> OR
<Telnet_internet_access>

Configuration messages can be used to set all the Telnet configurations.

<Telnet_backspace_key> ::= "Tdel:" <Backspace_key> <LF>
<Backspace_key> ::= 'B' OR 'b' (backspace) OR 'D' OR 'd' (delete)
 (option to use the backspace key as backspace or delete)

<Telnet_connection_name> ::= "Tname:" <8bit_string> <LF>
 (name of the connection which can be seen in the Telnet application NOTE! This field must be the first configuration field!)

<Telnet_destination_host> ::= "Thst:" <8bit_string> <LF>
 (destination host name, either IP-address or host name)

<Telnet_internet_access> ::= "Tiap:" <access_point> <LF>
 (defines the Internet access point; if none is defined the default will be used, Internet access point has to be defined with a configuration message)

Example message:

```
//SIAP11
Telnet connection!
Tname:My connection
```

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Tiap:My access
 Thst:computer.company.com
 Tdel:DEL

This configuration message will configure a connection to the Telnet application named "My connection". The connection will use the Internet access point "My access" and will connect to the host, computer.company.com, using the backspace key as delete.

3.9 Terminal Settings

The following Terminal application settings can be configured with a configuration message.

```

<Terminal_settings> ::=
<Terminal_incoming_echo> OR
<Terminal_incoming_line_end>) OR
<Terminal_connection_name> OR
<Terminal_backspace_key> OR
<Terminal_data_bits> OR
<Terminal_line_end_convention> OR
<Terminal_local_echo> OR
<Terminal_modem_init> OR
<Terminal_parity> OR
<Terminal_phone_number> OR
<Terminal_stop_bits>

<Terminal_backspace_key> ::= "Rdel:" <Backspace_key> <LF>
  <Backspace_key> ::= 'B' OR 'b' (backspace) OR 'D' OR 'd' (delete)
  (option to use the backspace key as backspace or delete)

<Terminal_connection_name> ::= "Rname:" <8bit_string> <LF>
  (the name for the defined connection. This field must be the first configuration field!)

<Terminal_data_bits> ::= "Rdat:" <Terminal_databits> <LF>
  <Terminal_databits> ::= "7" OR "8"
  (the number of data bits to use in the connection)

<Terminal_incoming_echo> ::= "Reci:" <flip_option> <LF>
  <flip_option> ::= <On> ("any non-zero number") OR <Off> ("0")
  (determines if the local echo is on at incoming data calls)

<Terminal_incoming_line_end> ::= "Reni:" <Terminal_line_end> <LF>
  <Terminal_line_end> ::= "CR" OR "LF" OR "CRLF"

<Terminal_local_echo> ::= "Rech:" <flip_option> <LF>
  <flip_option> ::= <On> OR <Off>
  (setting for Local echo on or off)

<Terminal_line_end> ::= "Rend:" <Terminal_line_end> <LF>
  <Terminal_line_end> ::= "CR" (Carriage Return) OR "LF" (Line Feed) OR "CRLF" (Carriage
  Return & Line Feed)

<Terminal_modem_init> ::= "Rini:" <8bit_string> <LF>
  (the modem initialization string for the connection)

<Terminal_parity> ::= "Rpar:" <Terminal_parity> <LF>

```

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<Terminal_parity> ::= ("n" OR "N"> as in "None") OR ("o" OR "O"> as in "Odd") OR ("e" OR "E"> as in "Even")

(to set the connection parity)

<Terminal_phone_number> ::= "Rtel:" <phone_number> <LF>

(the phone number to call)

<Terminal_stop_bits> ::= "Rstp:" <Terminal_stopbits> <LF>

<Terminal_stopbits> ::= "1" OR "2"

(definition for stopbits option)

An example message:

```
//SIAP11
Terminal configuration!
Rname: My connection
Rtel:+123456789
Rdat:8
Rstp:1
Rech:On
Rini:ats35=0
Rdel:BS
```

This smart message will define a basic 8N1 ISDN connection named "My connection".

3.10 WWW Autofetch

The Autofetch message starts an automatic retrieval of a web page defined in the Autofetch_url field. Autofetch_iap defines the Internet access point to be used. If none is defined, the default will be used. The URL can be saved to the Bookmark under a name specified in Autofetch_name. Optional fields in this message format are shown in brackets.

```
<Autofetch_item> ::=
<Autofetch_url>
[
<Autofetch_body>OR
<Autofetch_header> OR
<Autofetch_iap> OR
<Autofetch_method> OR
<Autofetch_name> OR
]
```

For defining the fields one must use definition tags to give the information to the communicator. Each item must have a definition tag.

<Autofetch_body> ::= "Abdy:" <8bit_string> <LF>

(optional fetch message body text, used with POST method to send form data)

<Autofetch_header> ::= "Ahdr:" <8bit_string> <LF>

(additional HTTP headers)

<Autofetch_iap> ::= "Aiap:" <access_point> <LF>

(the current Internet Access point Note: This autofetch command can only be used if the Internet access point was configured with the configuration message)

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<Autofetch_name> ::= "Aname:" <8bit_string> <LF>

(the Bookmark name to be created for the URL, maximum of 31 characters)

<Autofetch_method> ::= "Amth:" "1" (Get) OR "2" (Post) <LF>

(fetch method, the default is GET)

<Autofetch_url> ::= "Aurl:" <8bit_string> <LF>

(the URL to be retrieved, maximum is 1000 characters)

An example message:

```
//SIAP11
This message will Autofetch!
Aurl:www.forum.nokia.com
Aname:Forum.Nokia
Aiap:Company access
```

This message instructs the communicator to retrieve the URL <http://www.forum.nokia.com> using an Internet access point called Company access. The URL will be saved to the Bookmark as Forum Nokia.

3.11 WWW Bookmarks

This message will save a URL in the communicator Bookmarks. The Internet access point can be defined or selected automatically.

```
<Bookmark_item> ::=
< Bookmark_name> AND
< Bookmark_URL>
[
< Bookmark_autoselect_iap> OR
< Bookmark_access_point> OR
< Bookmark_folder>
]
```

The tags for defining the message are listed below. Optional fields are shown in brackets.

<Bookmark_folder> ::= "Hdir:" <8bit_string> <LF>

(WWW Bookmark item folder.)

<Bookmark_name> ::= "Hname:" <8bit_string> <LF>

(the Bookmark name to be created for the URL, maximum is 31 characters)

<Bookmark_URL> ::= "Hurl:" <8bit_string> <LF>

(the URL to be retrieved, maximum is 1000 characters)

<Bookmark_autoselect_iap> ::= "Haap:" <flip_option> <LF>

<flip_option> ::= <Yes> ("Y" OR "Yes") OR <No> ("N" OR "No")

(Yes selects the default IAP, but only if the IAP has been configured via configuration message
No selects the default IAP)

<Bookmark_access_point> ::= "Hiap:" <access_point> <LF>

(the predefined Internet Access Point, to use this option the Internet access point has to be configured via configuration message)

Example message:

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```
//SIAP11
Nokia web page
Hname:Nokia
Hurl:www.nokia.com
Haap:N
Hiap:Company access
```

This message will create a Bookmark item called Nokia, which will retrieve the URL www.nokia.com. This Bookmark item will use a specific Internet access point called Company access to retrieve the page.

3.12 WWW Settings

The default Internet access point used by the WWW-browser can be configured with this special smart message.

```
<WWW_item>
<WWW_access_point> ::= "Wiap:" <access_point> <LF>
    (the access point used as the default Internet Access Point in the WWW Browser application,
    this has to be configured with a configuration message.)

<WWW_cookies> ::= "Wcoo"
    <Flip option <Yes> ("Y" OR "Yes") OR <No> ("N" OR "No")
    (if the cookies should be accepted or not)
```

Example message:

```
//SIAP11
Use this!
Wiap:Company access
```

When using this message, remember that Internet access will be set only if the access point (in this case Company access) is defined by sending an Internet access point configuration message to the device, as defined in section 3.3.

3.13 FTP Settings

For configuring the FTP application settings.

```
<FTP_settings> ::=
<FTP_name> ::= "Fname:" <8bit_string> <LF> AND
    (the FTP connection title)

<FTP_access_point> ::= "Fiap:" <access_point> <LF> OR
    (the name of the access point used with this connection. The access point has to be created
    using a remote configuration message)

<FTP_IP_address> ::= "Fip:" <ip_string> <LF> OR
    (FTP server IP-address)

<FTP_pasword> ::= "Fpwd:" <8bit_string> <LF> OR
    (login password)

<FTP_port> ::= "Fprt:" <port_number> <LF> OR
    (the FTP server port, default value is 21)

<FTP_username> ::= "Fuid" <8bit_string> <LF>
```

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(login username)

Example message:

```
//SIAP11
FTP config.
Fname:MyFTP
Fiap: Company Access
Fip:123.123.123.123
Fuid:Me
Fpwd:2Secret4U
```

3.14 Remote Synchronisation Settings

To configuring the Remote synchronisation application settings.

```
<Remotes_settings> ::=
<Remotes_destination_host> ::= "Xhst:" <8bit_string> <LF> OR
    <Remotes_destination_host> max length is 255 characters.
    (the host where the PC Suite for the Nokia 9110 Communicator is running)

<Remotes_internet_access> ::= "Xiap:" <access_point> <LF>
    (the Internet Access Point to be used to access the PC running the PC Suite for the Nokia 9110
    Communicator, this has to be created with the configuration message)
```

Example message:

```
//SIAP11
Remote synch. config.
Xdst:My.PC.com
Xiap:Company Access
```

This message configures the Nokia 9110 Communicator remote synchronisation application settings so that the host running the PC Suite for the Nokia 9110 Communicator is set to be My.PC.com and the Internet access used is the Company Access.

4. DIFFERENCES BETWEEN THE NOKIA 9000I COMMUNICATOR MESSAGES AND THE NOKIA 9110 COMMUNICATOR MESSAGES

The Nokia 9110 Communicator has several new features compared to the Nokia 9000i Communicator. This is the list of all the new tags:

Autofetch: Abdy, Ahdr, Amth

FTP applications: Fiap, Fip, Fname, Fprt, Fpwd, Fuid

Text Web settings: Gname, Gsrv, Gtel

WWW bookmark settings: Hdir

Internet access settings: Ispo, Isrx

Internet settings: Imdm, Iv42

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Mail settings: Map Mid

Terminal settings: Reci, Rend, Rini

SMS settings: Sname

Telephone settings: Tbox

WWW settings: Wcoo

Remote synchronisation settings: Xhst, Xiap

The tags mentioned above do not work on the Nokia 9000i Communicator.

5. SPECIFICATIONS

- Maximum message length in a normal configuration message is 160 characters. This is the entire message, including the headers, tags and the information.
- In NBS messages there is no length limitation, the only limitation may come from the device.
- Devices sending NBS messages should be able to divide the messages into correct parts and add the NBS specified headers. The Nokia 9110 Communicator can do this automatically. Other devices split the message so that each message begins with the following tag: //SCKL157F157Faabbcc, where aa is the number of the message, bb is the number of the parts in the configuration SMS and cc is the number of the part being viewed. For example: //SCKL157F157F010302 is the second of three parts in the first message.
- WWW Bookmark name and URL may appear in any order, but must be in pairs.
- Service providers must take field length limits into consideration when designing the configuration and set-up of their service.
- If the value of a field is left empty, the empty value will be updated to the communicator. Check for empty field values in your message!